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09/509,626	03/30/2000	THOMAS MULLER	3926.004	7855

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EXAMINER

YUN, EUGENE

ART UNIT

PAPER NUMBER

2682

DATE MAILED: 11/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/509,626	MULLER, THOMAS
	Examiner Eugene Yun	Art Unit 2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on ____.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

4) Claim(s) 1-10 is/are pending in the application.

4a) Of the above claim(s) ____ is/are withdrawn from consideration.

5) Claim(s) ____ is/are allowed.

6) Claim(s) 1-10 is/are rejected.

7) Claim(s) ____ is/are objected to.

8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 30 December 2002 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. ____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.

4) Interview Summary (PTO-413) Paper No(s). ____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erten et al. (US 6,236,862) in view of Taniwa (US 5,220,554).

Referring to Claim 1, Erten teaches a process for simultaneously receiving different radio standards, comprising:

-superposing multiple various modulation types of radio standards in a single radio receiver (see Claim 14 of Erten) and;
-carrying out a separation of the same by a subsequent digital signal processing (see fig. 16).

Erten does not teach the superposing taking place following analog signal processing. Taniwa teaches the superposing taking place following analog signal processing (see col. 5, lines 61-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Taniwa to said process of Erten in order to correctly demodulate data even when the reproduced signal includes distortion.

Referring to Claim 10, Erten teaches a process for simultaneously receiving different radio standards in a single radio receiver, comprising:

-signal processing of multiple various modulation types of radio standards in a single radio receiver, superposing said multiple various modulation types of radio standards onto a common intermediate frequency, mixing the product of said superposing (see claim 14 of Erten); and

-subsequently carrying out a separation of the mixed product by digital signal processing (see fig. 16).

Erten does not teach the superposing taking place following analog signal processing. Taniwa teaches the superposing taking place following analog signal processing (see col. 5, lines 61-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Taniwa to said process of Erten in order to correctly demodulate data even when the reproduced signal includes distortion.

Referring to Claim 2, Erten also teaches the superposing carried out in two frequency ranges (see Claim 14 of Erten).

Referring to Claim 3, Erten also teaches the superposing of high-frequency signals carried out prior to the first mixing step (see col. 27, lines 13-20).

Referring to Claim 8, Erten also teaches an A/D conversion carried out prior to demodulation (see fig. 16).

3. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erten and Taniwa in view of Ostman (US 6,069,923).

Referring to Claim 4, the combination of Erten and Taniwa does not teach the sum of the output of two narrow band oscillators is employed local oscillator for the first mixing step. Ostman teaches the sum of the output of two narrow band oscillators is employed local oscillator for the first mixing step (see 208a and 208b of fig. 2a and 308 of fig. 3a). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Ostman to said process of Erten in order to better minimize the parts of a receiver when receiving signals of different modulation frequencies.

Referring to Claim 5, Ostman also teaches that for each modulation type, one filter 204a and 204b (fig. 2a) and amplifier 202a and 202b (fig. 2a) is employed.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erten and Taniwa in view of Krasner (WO 97/14056).

Referring to Claim 6, the combination of Erten and Taniwa does not teach that for all modulation types, a special HF-filter with level accommodation and band selection is employed. Krasner teaches that for all modulation types, a special HF-filter 3 and 4 (fig. 1A) with level accommodation and band selection is employed (see pg. 5, lines 7-8). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Krasner to said process of Erten in order to better minimize the parts of a receiver when receiving signals of different modulation frequencies.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erten, Taniwa and Krasner in view of Kim (US 5,963,592).

Krasner teaches a superposing of a CDMA-encoded signal (GPS signal in fig. 1A is an example of a CDMA-encoded signal). The combination of Erten, Taniwa and Krasner does not teach the superposing of a OFDM-encoded signal. Kim teaches the superposing of a OFDM-encoded signal (see col. 1, lines 47-50). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Kim to said process of Krasner in order to better use one circuitry for two different radio standards.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erten, Taniwa, and O (US 6,061,338).

Referring to Claim 9, Erten teaches a process for simultaneously receiving different radio standards, comprising:

-receiving and superposing multiple various modulation types of radio standards in a single radio receiver (see Claim 14 of Erten); and

-carrying out a separation of the same by a subsequent digital signal processing (see fig. 16).

Erten does not teach the superposing taking place following analog signal processing. Taniwa teaches the superposing taking place following analog signal processing (see col. 5, lines 61-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Taniwa to said

process of Erten in order to correctly demodulate data even when the reproduced signal includes distortion. The combination of Erten and Taniwa does not teach one of the various modulation types including a CDMA encoded signal. O teaches one of the various modulation types including a CDMA encoded signal (see col. 1, lines 27-31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of O to said process of Erten in order to expand the capabilities of the multi-mode receiver.

Response to Arguments

7. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene Yun whose telephone number is (703) 305-2689. The examiner can normally be reached on 8:30am-5:30pm Alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (703) 308-6739. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Eugene Yun
Examiner
Art Unit 2682

EY



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